



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/765,135	01/18/2001	Wolfgang Schulz	SCHULZ, W-1-CIP	7822

25889 7590 08/22/2003

WILLIAM COLLARD  
COLLARD & ROE, P.C.  
1077 NORTHERN BOULEVARD  
ROSLYN, NY 11576

EXAMINER
----------

BEHREND, HARVEY E

ART UNIT	PAPER NUMBER
----------	--------------

3641

DATE MAILED: 08/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/765135

Applicant(s)

Schulz

Examiner

Behrend

Group Art Unit

3641

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☒ Responsive to communication(s) filed on 6/4/03 & 3/17/03.
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1, 3-9 is/are pending in the application.
- ☐ Of the above claim(s) is/are withdrawn from consideration.
- ☐ Claim(s) is/are allowed.
- ☒ Claim(s) ~~1, 3-9~~ is/are rejected.
- ☐ Claim(s) is/are objected to.
- ☐ Claim(s) are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☒ The proposed drawing ~~correction~~, filed on 3/17/03 ☐ approved ☒ disapproved (see section 2 of the Office action).
- ☐ The drawing(s) filed on is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
  - ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
  - ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
  - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other \_\_\_\_\_

Office Action Summary

Art Unit: 3651

1. The amendment filed 3/17/03 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The amendment to page 10 lines 1-17,  
to page 11 lines 1-9,  
to page 12 lines 21-25,  
to page 13 lines 1-8,  
to page 16 (the insertion below bottom line 18) and,  
to page 26 lines 21-26.

Applicant is required to cancel the new matter in the reply to this Office Action.

The amendment filed 6/4/03 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The amendment to the paragraph bridging pages 26 to 27.

Applicant is required to cancel the new matter in the reply to this Office Action.

There is no proper support in the original disclosure for any of the above referenced amendments.

Note that even the deletion of subject matter can be considered new matter. See MPFP 706.03(0).

Note also the discussion concerning "incorporation by reference" in section 2 below.

2. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 3/17/03 (the addition of new Figs. 7 and 8) have been disapproved because they introduce new matter into the drawings. 37 CFR 1.121(a)(6) states that no amendment may introduce new matter into the disclosure of an application. The original disclosure does not support the showing of new Figs. 7 and 8.

Contrary to applicants argument at the bottom of page 10 of the 3/17/03 response, the "Kerntechnik" document has not been "incorporated by reference".

While applicants specification (e.g. see the top of page 9) refers to the Kerntechnik document, it does not actually state that the subject matter thereof, is "incorporated by reference" (note these words must actually be utilized).

Mere reference to another application, patent, or publication is not an incorporation of anything therein into the application containing such reference for the purpose of the disclosure required by 35 U.S.C. 112, first paragraph. *In re de Seversky*, 177 USPQ 144. See MPEP 608.01(p) Part IA.

Furthermore, as set forth in MPEP 608.01(p) part IA, "essential" material cannot be incorporated by reference to non-patent publications.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention

The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 3651

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 and 3-9 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention, for the reasons set forth in section 2 of the 9/12/02 Office action.

Applicant arguments are unpersuasive.

Note that discussion in the "Remarks" section of an amendment cannot serve to make the disclosure itself, complete and enabling.

As pointed out in section 2 above, the "Kerntechnik" document cannot properly be relied on to provide an enabling disclosure.

As pointed out in said section 2 of the 9/12/02 Office action, there is no adequate description nor enabling disclosure of the material suitable for each of the enclosures (especially since they are to be movable or guided in some unspecified manner and, "to have several resistances in a staggered and easily presentable manner" (spec., page 11) and, that they can break or be destroyed in some way without damaging the adjacent enclosure (spec. page 11 last 5 lines) nor, of what initially maintains each of the enclosures in their predetermined spaced apart locations (there is also no adequate description nor enabling disclosure of how and in what manner, each of these features may be determined).

There is still no adequate description nor enabling disclosure of how and in what manner each enclosure is "removable" by being "guided in a controlled way to the

Art Unit: 3651

outside” or by being “actually spatially removed from its starting or initial position”, etc., (spec. page 10).

Applicants’ argument at the bottom of page 7 of the 3/17/03 response is unpersuasive as applicant fails to identify how and in what manner, the absorber enclosure “breaks up” or “get destroyed” in “some other way” (unspecified).

As to applicants argument in the paragraph bridging pages 8 and 9 of the 3/17/03 response, there is no basis in the original disclosure for stating that the term “part segments” meant “tubular sections”.

Furthermore, if the enclosures actually are formed of a plurality of tubular sections arranged vertically with abutting surfaces, there is no adequate description nor enabling disclosure of how and in what manner, the abutting surfaces are caused to remain in an abutting relation (e.g. such as during subsequent movement, use, etc., of the control element).

There is no adequate description nor enabling disclosure of how and in what manner, the “dimensions of the inner absorber are selected in such a way that the inner absorber enclosure receives sintered absorber tablets” (see claim 5).

Furthermore, the disclosure is insufficient as to what the “dimensions” have to do with the encloser receiving sintered absorber tablets.

Applicants argument on page 9 of the 3/17/03 response in regard to the above limitations in claim 5, are unpersuasive. Applicant appears to be arguing the relationship of the dimensions of the enclosure relative to that of the sintered absorber tablets (this however is a feature not present in claim 5 nor does it even appear to be

Art Unit: 3651

disclosed as such in the specification). Furthermore, such presupposes that all sintered absorber tablets have the exact same dimensions (and applicant has not shown such to be the case).

At the bottom of page 9 of the 3/17/03 response, applicant states (in regard to claims 8 and 9), that the control element is a component of the BWR or of the PWR and not vise-versa.

However, the preamble of claim 8 still recites a BWR as being a component of the control element and, the preamble of claim 9 still recites a PWR as being a component of the control element.

Additionally, claim 1 has been amended to recite that each absorber rod is movable within the control element. However, the disclosure itself does not make any mention of the absorber rod as a whole, being movable within the control element. Accordingly, there is no adequate description nor enabling disclosure of how and in what manner, the absorber rod itself, is movable within the control element.

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features of claim 1 "a respective absorber enclosure is removable from a starting position and a mechanical resistance is formed for compressing and containing the absorber", "each absorber rod movable within the control element"; the outer encloser completely surrounding and enclosing the inner encloser (claim 3), the BWR of claim 8 and; the PWR of claim 9; must be shown or the features cancelled from the claim(s). No new matter should be entered.

Art Unit: 3651

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

As set forth in section 2 above, the proposed new Figs. 7 and 8 have not been approved as they are drawn to new matter.

However, if even they had been approved, there still is no drawing showing the BWR of claim 8 nor, the PWR of claim 9.

As to applicants argument on page 10 of the 3/17/03 response, Fig. 3 does not show all of the limitations of claim 3.

Correction is required.

6. Claims 1, 3-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, for the reasons set forth in section 3 of the 9/12/02 Office action.

Applicants arguments concerning the "wherein" clauses, are unpersuasive of any error. The issue here is not whether a wherein clause can be found in a prior U.S. patent. Instead, the issue here is what is the actual limiting effect of the language in the wherein clauses, on applicant claims (note the discussion of this issue in said section 3 of the 9/12/02 Office action). MPEP 2106 II, C is considered controlling here.

7. Claims 1, 3-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to



one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no proper support in the original disclosure for reciting that "each absorber rod [is] movable within the control element" (see claim 1).

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 3, 4 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by any of Dietrich et al, Kaufman, Jr. et al, Benzler et al, or McCorkle et al.

In Kaufman, Jr. et al, note the plurality of nested arrangements in Fig. 6 (the claimed absorbed reads on the innermost element 102 and the enclosures read on the surrounding nested arrangement of elements 102) (note that the claim language does not preclude the enclosures from containing an absorber material)(further, it is noted that even stainless steel has been used as a neutron absorber).

In Dietrich et al, note the spaced apart arrangement of elements in Fig. 4.

In Benzler et al, note Fig. 5 which shows four nested tubes which can be surrounded by tube 10 (the claimed absorber reads on the innermost tube).

In McCorkle et al, note Fig. 9 (the absorber is element 93).

Applicants arguments are unpersuasive and do not appear directed to the rejection as outlined above.

The references each illustrate an absorber rod surrounded by first, second and third enclosures which are spaced from one another (exactly as recited in applicant claim 1).

Since applicants claims do not recite the material out of which each of the first, second and third enclosures are formed from, applicants claims thus read on the enclosures being formed of any material (including a fuel material as in Dietrich et al).

Note that there is nothing in applicants actual claim language to define applicants claims over a fuel assembly such as that of Fig. 9 of McCorkle et al wherein absorber rod 93 is enclosed by a plurality of concentric cylinders. A fuel assembly having a burnable poison rod therein such as in Fig. 9 of McCorkle et al will inherently have a "controlling" effect on a nuclear reactor and thus function as a "control element".

The absorber rod 93 in Fig. 9 of McCorkle et al is considered movable within the fuel (control) element in the same manner that applicants absorber rod is movable in his control element.

Additionally, col. 5 (e.g. see lines 65+) of McCorkle et al states that cooling water enters beryllium cylinder 91 (which contains absorber rod 93) and flows past rod 93 to outlet opening 102 (meaning there is a space between absorber rod 93 and the inner

Art Unit: 3651

surface of cylinder 91 (the absorber rod 93 is considered inherently movable within this space)).

As to Benzler et al, applicants claims do not preclude the presence of "a further absorber on the outside".

As to features which are considered as being inherent in a reference note the case law of In re Ludtke, 169 USPQ 563, In re Swinehart, 169 USPQ 226, In re Fitzgerald, 205 USPQ 594, In re Best et al, 195 USPQ 430, and also In re Brown, 173 USPQ 685, 688.

10. Claims 1, 3-6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by either Williams et al or Kurihara et al.

In Williams et al, note absorber 20, inner enclosurer 24 or 23, the outer ring of 5 elements represents another enclosurer and element 25 is the outer enclosurer.

In Kurihara et al, note Fig. 1, the absorber is inside the cladding 24 (the inner enclosurer) element 25 is another enclosurer, 32 is another enclosurer, the ring of rod shaped elements surrounding the central rod represents another enclosurer (see Fig. 2).

Applicants arguments are unpersuasive as applicant has not shown that the references do not teach what the examiner has stated they teach.

The examiner has shown how the claims read on each of the references.

As to applicants further arguments to Williams being a fuel assembly, note the discussion in section 9 above as to how applicants claim can be read on a fuel

Art Unit: 3651

assembly. In Williams et al, absorber 20 is considered movable in the assembly in the same manner that applicant absorber rod is movable within the control element.

11. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of Dietrich et al, Williams et al or Kurihara et al.

As to claims 6 and 7, the use of boron carbide as a neutron absorber at a density less than 70% of theoretical density, is a conventionally known expedient in the art and hence obvious. Note MPEP 2144.03.

As to claims such claims 8 and 9, these claims do not recite any structure specific to a particular type of nuclear reactor. The control elements of the references are inherently capable of being utilized in any type of nuclear reactor including a BWR or PWR.

If the reference to a BWR or PWR is being used as a statement of intended or desired use, note that such statements do not serve to patentably distinguish the claimed structure over that of the reference. See In re Pearson, 181 USPQ 641; In re Yanush, 177 USPQ 705; In re Finsterwalder, 168 USPQ 530; In re Casey, 152 USPQ 235; In re Otto, 136 USPQ 458; Ex parte Masham, 2 USPQ 2<sup>nd</sup> 1647.

See MPEP 2114 which states:

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ 2<sup>nd</sup> 1647.

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than functions. In re Danly, 120 USPQ 528, 531.

Apparatus claims cover what a device is, not what a device does. Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ 2d 1525, 1528.

As set forth in MPEP 2115, a recitation in a claim to the material or article worked upon does not serve to limit an apparatus claim.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harvey Behrend whose telephone number is (703) 305-1831. The examiner can normally be reached on Tuesday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone, can be reached on (703) 306-4198. The fax phone number for the organization where this application or proceeding is assigned is (703) 306-4195.

• Application/Control Number: 09/765,135

Page 13

• Art Unit: 3651

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

Behrend/kn  
August 19, 2003

A handwritten signature in black ink, appearing to read 'H. Behrend', with a long horizontal line extending to the right.

**HARVEY E. BEHREND  
PRIMARY EXAMINER**